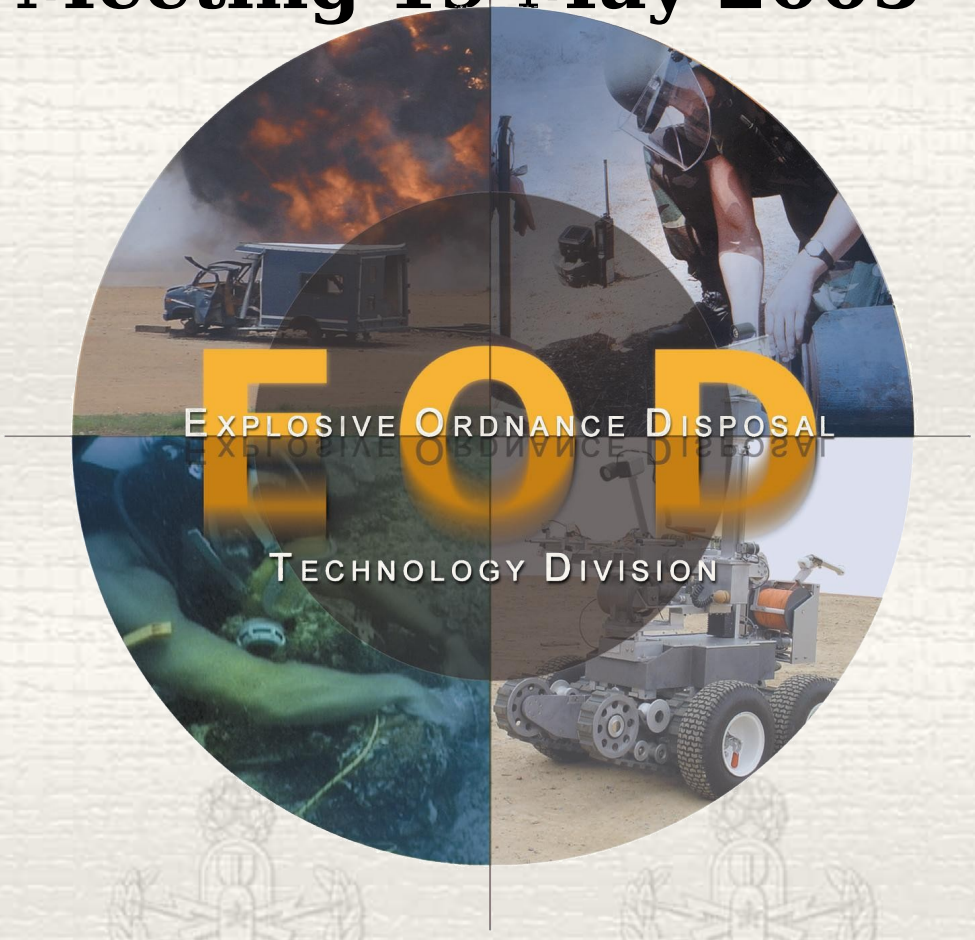
Joint Laser Ordnance Neutralization System (JLONS) Industry Day Meeting 19 May 2005



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JLONS Industry Day Agenda

08:30 - Agenda
08:35 – Welcome/ Introductions
Acquisition Strategy
08:55 – JLONS Project Overview/Meeting Purpose

- **Capabilities Development Document (CDD) Overview**
  - Key Performance Parameters (KPP's)
  - Mission Scenarios
- **Government Desires in JLONS Program**
  - High Mean Time Between Failures (MTBF)
  - Commonality of HW/SW
- **SOW**
- **Performance Specification**

10:00 - <<Break>> 10:15

- **Section M and L**
- **IPT Structure**
- **Draft Milestone Schedule**
  - Near Term Milestones
- **White Paper Topics**

11:30 - 13:00 Lunch
13:00 -15:00 Discussion Session

Welcome/ Introductions

- **Chris DeBolt – Program Manager (JLONS IPT Lead)**
- **Jerry Decker – Acquisition Director (Logistics PIPT Lead)**
- **David Nelson – Project Manager (Syst Eng PIPT Lead)**
- **William Transue – Principal for Safety (Safety PIPT Lead)**
- **Scott Strohman – Head, Technology Support Branch (T&E PIPT co-lead)**
- **Amanda Vehslage – Project Engineer (T&E PIPT co-lead)**

- **Jessica Maddox, Contracts Specialist**
  - 301-744-6614, jessica.maddox@navy.mil

JLONS Project Overview/Meeting Purpose

- **JLONS Project Overview**
  - What the JLONS is to do
    - Rapidly neutralize small submunitions using a laser
    - Neutralize other munitions and IEDs using a laser
    - Integrate with HMMWV, Cougar, and RC-50
    - 320 hours operation without failure
    - Ruggedized for environments, hardened to fragmentation
    - Modular, open architecture
- **Purpose of Industry Day Meeting:**
  - Review and Refine the SOW and Performance Specification
  - White Paper Inputs (treated as proprietary)
  - Answer Industry Questions
  - Initiate a collaborative effort with industry by releasing Government's information in order to make a better team to get a better product
  - Overall: Reduce Program Risk

Acquisition Strategy

- Initial Capability
- Evolutionary Incremental Upgrades
- Modular Open System Architecture
- Commercial Vendor as Depot
- Performance Based Logistics
- Human Systems Integration
- Common Hardware/Software
- 15 years Service Life

Contracting Strategy

- **Constraints:**
  - Mandated 5 year contract limit
  - Legal Review of Option 1
- **Strategies:**
  - Option 1
    - R&D contract 3-4 years
    - Production contract following R&D (remainder of 5 years)
    - Remaining Production years as sole source
    - Concurrent Depot contract
  - Option 2
    - R&D contract 3-4 years
    - Compete Production contract
    - Compete Depot contract
- **Key Points**
  - ACAT IVT with OPTEVFOR performing operational testing
  - TDP data rights to allow open bidding on procurement/support contract

NAVSEA
NAVAL SEA SYSTEMS COMMAND
EOD Technology Division

JLONS Platforms

CDD Overview – KPP's

- **Effectiveness – Neutralization: 0.90 with 80% confidence level**
- **Effectiveness – Range: 25m – 250m**
- **Endurance - 4 hours**
- **System Reliability - 320 hours**
- **Interoperability/Compatibility with EOD Resources - Compatible with Cougar 4X4 and 6X6 models, the HMMWV and the RC-50 as prime mover vehicles.**
- **Availability - 0.80**
- **Survivability – 2.5 psi blast overpressure and fragmentation impact 80% of the time**
- **General Transportability (major movement) – JLONS shall withstand the vibration of the prime mover vehicles 2100 miles**

CDD Overview – Mission Scenarios

- Centralized UXO collection area
- Ammo Supply Point Clean-up
- Surface Mine Clearance and Breaching
- Area denial munitions on beaches, roads, and airfields
- Clearing our own munitions from our adversary's airfields
- Clean up of UXO on training ranges
- Main Supply Route Clearance

- See handouts for details

Gov Desires in JLONS Program

- **High MTBF**
- **Little or no O-level maintenance**
  - High use of “bit” and “bite”
  - Automatic troubleshooting to the Lowest Replaceable Unit (LRU)
  - Plug and play of new/improved LRUs
- **Commonality of HW/SW between prime mover vehicles**
  - Ideally only adapters/attachment fixtures are different but components are the same
- **“Dial-A-Reaction”**
- **Future Increments**
  - FY13 - Full IED capability (preprogrammed laser movement).
  - FY15 - Full battle force network integration (Global Positioning System (GPS) targeting and video to high command, telemetry, vehicle movement) and integration to Joint Digital Information Gathering System and the future Decision Support System for EOD.
  - FY17 - Non-line of sight capability and more rapidly neutralize thicker cased UXO.
  - FY19 - Uncover and neutralize shallow buried UXO using pulsed laser technology.
  - FY21 - Engage targets while moving.

SOW

- **Emphasis on strong approaches for:**
  - Systems Engineering
  - Logistics
  - Safety
- **Documentation**
  - Where the information goes
    - Safety – each Service's Laser Safety Review Boards
    - Logistics Analysis - Depot
    - Data Rights – Production Contract and Depot
- **Ideally have documentation cost estimated separately**
- **Our vision:**
  - No trailer

SOW - Latest updates/changes/additions

- Government Review and approval of
  - All test reports
  - Design, execution, and reporting all HW, SW, and Integration Testing
- Allow Government oversight of
  - Contractor TRR especially if Gov ranges used
  - Component, sub-system, and integrated sub-system testing
- EDM and PRM Demonstration
- Evaluate ILS train during DT-I
- Subcontractor partner scheme and config management approach w/ subs and support approach agreements
- Ensure Gov/Contr engineering review upon failures during DT-I to determine go forward path
- Safety Assessment Report (SAR) and Safety Aspects of Prime Mover Integration in SSPP
- Sub System Hazard Analysis, SAR, System Hazard Analysis updates at project phases
- Software Safety
- Intuitive Controls

Performance Specification

- **How much Ordnance does Government need to provide (ROM)**
- **Not stated in Performance specification, ultimate desire of Government is to get the "dial-a-reaction"**
  - Will not be required in contract because:
    - No % yield info exists only anecdotal evidence
    - Aimpoints vs round type vs condition vs fill - info not available
  - Contract will require beam power manipulation (beam power and spot size) to allow Government testing to determine Low Order characteristics.

<<Break>>

15 minutes

Section M

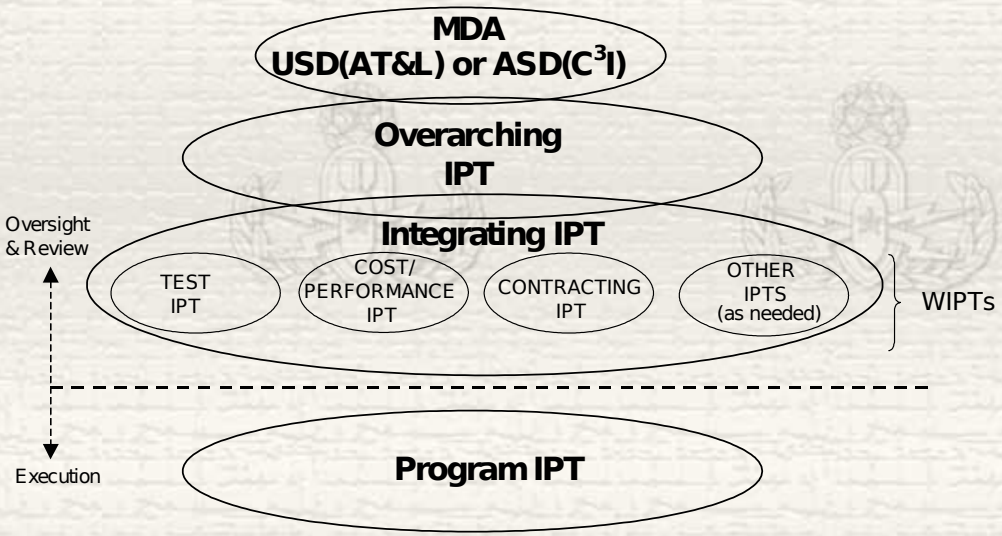
- **FACTOR A – Technical Proposal**
- **FACTOR B – Logistics Approach**
- **FACTOR C – Laser safety**
- **FACTOR D – Program Management**
- **FACTOR E – Test approach**
- **FACTOR F – Data rights**
- **FACTOR G – Past Performance Information**

- **Handouts of Section M**
  - comments are requested
  - all information shall be kept proprietary

IPTs

Purpose: To facilitate decision-making by making recommendations based on timely inputs from the entire team

- **Overarching IPT (OIPT)**
  - Only required for ACAT ID and IAM programs
  - Chaired by OSD-level official
- **Integrating IPT (IIPT)**
  - Chaired by PM (or designee) and comprised of WIPTs
  - Coordinates WIPTs efforts
- **Working IPTs (WIPTs)**
  - Assist PM with developing structure, documentation, and resolving issues
- **Program IPTs (PIPTs)**
  - Working-level groups responsible for program execution
- **(Version 1.0); February 5, 1996**



For each program, there will be an OIPT and at least one WIPT. WIPTs will focus on a particular topic, such as test, cost/performance, contracting, etc. An Integrating IPT will coordinate WIPT efforts and cover all topics not otherwise assigned to another IPT.

JLONS IPT Structure, cont

Approval Milestone Decision Authority – PEO-LMW

Oversight & Review

Integrating IPT

Chairman - Mr. Chris DeBolt, Program Manager, PMS-EOD

- NAVSEA T&E
- PEO LMW CHENG
- OPNAV N757
- PEO LMW Logistics
- & Others TBD

Program IPT

Chairman - Mr. David Nelson, Project Manager

Execution

- T&E
- TTPs
- ILS
- Training
- Architecture
- Requirements
- Safety
- Contracts
- Others TBD

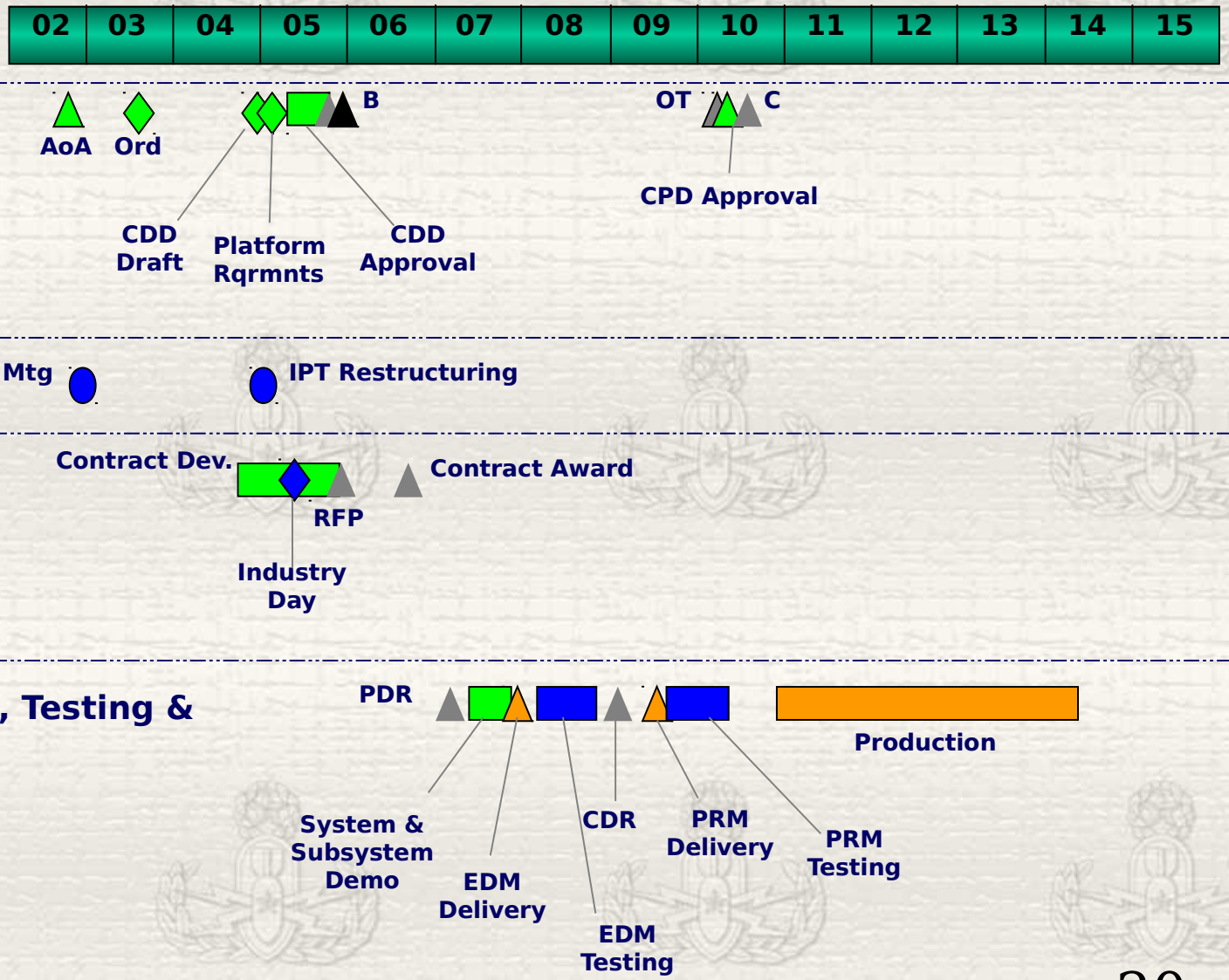
Background

- **MODS -** Early 1990's
- **ZEUS -** 1996-now
- **MUNS AoA**
  - Enhanced SMUD interim solution (SCS)
  - Laser neutralization ultimate solution
- **JLONS IPT**
  - 4 meeting 2002 to Oct 2003
  - ALONS, ZEUS, JLONS Roadmap reviewed
  - TWG & RWG worked CDD input
  - Draft CDD produced in RD format

Background, continued

- **Recent Efforts – FY05 Funded 6.4 Project**
  - 5 meetings with users
    - Discussed Effectiveness / Mission Scenarios
    - Safety / Logistics
  - Observed Dec 04 Zeus Testing
  - Drafted/Submitted CDD
    - Using previous draft, into new CJCSM 3170.01 format
    - Incorporating MODS and Hunter Killer mission scenarios
  - Assigned CDD technical areas as follows:
    - William Transue – Safety effort
    - Amanda Vehslage – Performance and effectiveness attributes
    - Scott Strohman & Amanda Vehslage –Test and Evaluation
    - Jerry Decker - Logistics

Notional Program Schedule



Near Term Milestones

- **CDD Development and Milestone B Documentation Preparation (ACAT IVT)**
  - Submitted draft CDD by 6 May 2005
  - CDD Approval expected 27 Oct 2005
  - Milestone B – 8 Dec 2005
- **RFP - 8 Dec 2005**
- **Contract Award – 14 Sep 2006**

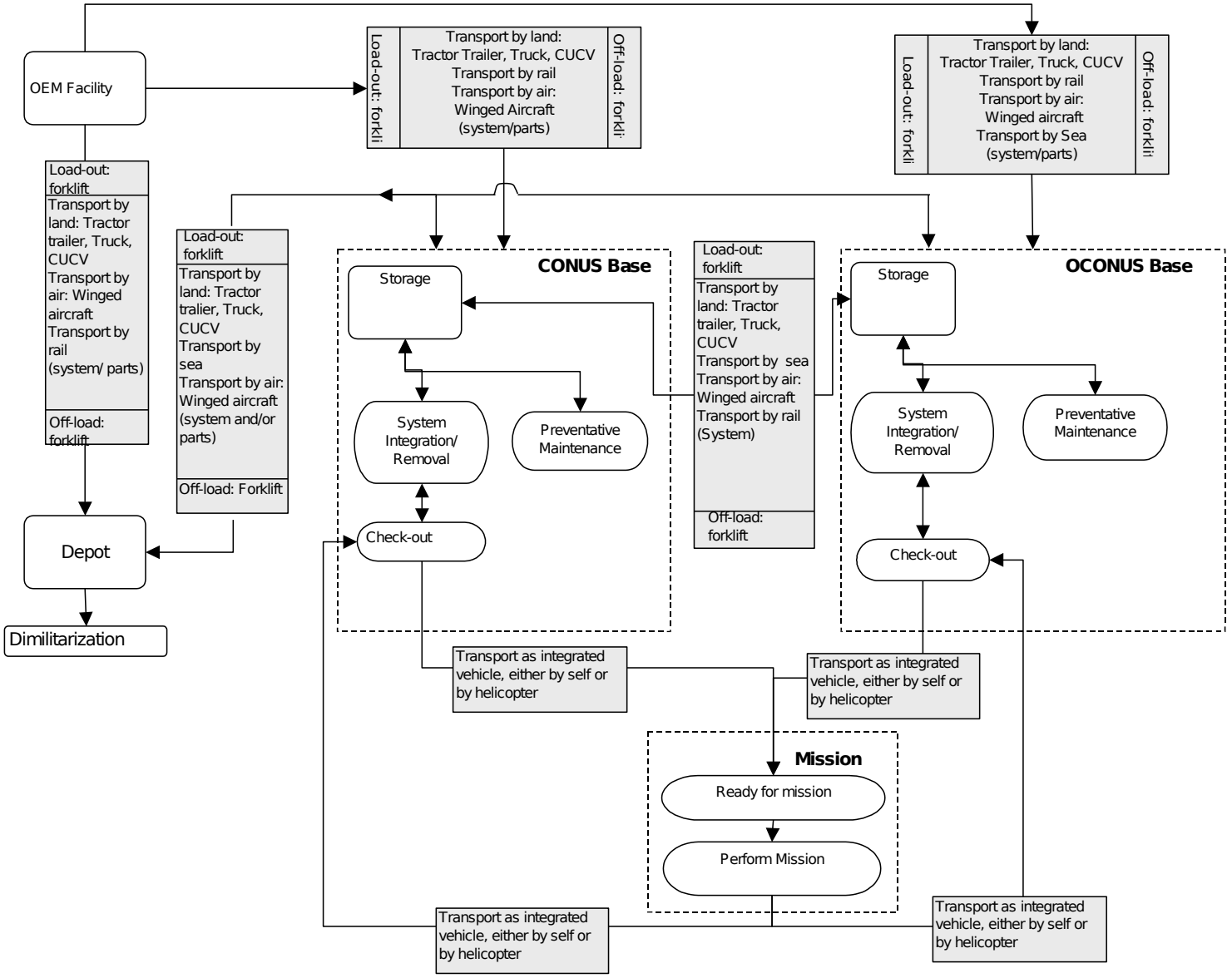
Test & Evaluation Phases

- **System/Subsystem Integration – May-Nov ‘07**
  - The contractor perform subsystem testing on EDM and system integration testing with government oversight. This phase proceeds until full system is integrated and demonstrated.
- **DT-I – Mar ‘08 - Nov ‘08**
  - EDM goes through all-up system testing, HSI, effectiveness, performance, and environments.
- **DT-II – Sep ‘09 - May ‘10**
  - After CDR, Contractor builds new configuration(s), PRM, from lessons learned from EDM testing. PRM goes through all-up system testing, HSI, effectiveness, performance, and environments along with operational effectiveness and training evaluations.
- **OT-I – Possibly Nov ’08 - ?**
  - Government shall use the EDM with any laser upgrades (PRM-like) in order to develop low order procedures.
- **OT-II – Apr ‘09 - May ‘10**
  - OPTEVFOR shall evaluate PRM for operational effectiveness and operational suitability, provide info on tactics, doctrine, organization, and personnel requirements, etc.

Integrated Logistics Support

- **Maintenance Philosophy**
  - O & D Level
  - O Level corrective maintenance remove and replace only
  - Depot repairs performed by Commercial vendor
- **Technical Manuals - Imbedded IETM**
- **Supply Support**
  - On Board Repair Parts (OBRP)
  - Depot Level Repair Parts (DLRP)
- **Reliability**
  - 320 hours without a mission critical failure
- **Training**
  - NAVSCOLEOD
  - CBT

Life Cycle Environmental Profile



Life Cycle State Table for J LONS

White Paper Info Request

- System Cost ROM and assumptions
- Contract Cost ROM with and without Data Rights
- Technical Risk
- Schedule Concerns
- Laser Safety Concerns
- Optimizations –Programmatically and technically (suggestions to Government on how to do solicitation better at a reduced cost)
- Suggested Contract Incentives Strategy
- Redlined SOW
- Redlined Performance Specification

Questions Received

- **1. System Costs ROM and assumptions**
- **Does Government Furnished Resources include Facilities such as?**
  - Live Test Range
  - Facility for performing environmental tests such as
  - High Operating Temperatures
  - Low Operating Temperatures
  - High Storage Temperatures
  - Low Storage Temperatures
  - Ice/Freezing Rain Tests
- **Does Government Furnished Items/Equipment/Personnel include?**
  - Ordnance to be used for live tests,
  - Sources and facility for EMC/EMI testing,
  - Helicopter/Fixed Wing (Jet & Propeller) Aircraft for transportation, vibration, & reliability tests,
  - Personnel to operate the EDM & PRM during the demonstration phase or will contractors operate it,
  - Supply military personnel for human engineering tests
  - Vehicles/platforms of each type
- **What are the Proposal Evaluation Criteria?**

Questions Received (2)

- **2. Schedule Concerns**
- **What is the delivery schedule for various phases of the program such as:**
- **a) EDM Demonstration**
- **b) PRM Demonstration**
- **When will the formal RFP be issued, how long will the response period be, and when is it anticipated that the program will be awarded?**

Questions Received (3)

- **3. Red-lined SOW**
- **Will Proposal be page limited and if so what will be the page count?**
- **Will there be a single award?**

Questions Received (4)

- **4. Red-lined Performance Specifications**
- **3.2.5 Target Data Acquisition and Recording**
  - Is it intended that the video must be digital?
  - Do you desire the GPS location of JLONS or the target? What is the desired accuracy?
- **3.2.11 Operator Control Console**
  - Is digital recording of data required for remote operation?
- **3.3.1 Prime Mover Vehicle**
  - Can the design vary for different platforms?
  - Is it permissible to utilize a towable solution for the system or some of the subsystems?

Questions Received (5)

- **4. Red-lined Performance Specifications**
- **3.3.2 Weight**
  - How critical is the weight limit? It appears that there is sufficient payload on the larger vehicles, but it is the smaller vehicles that would drive the design with respect to weight.
  - Does the requirement to provide remote control of the system apply only to the smaller vehicles (the RC30/RC50) and not to the HMMWV or Cougar?
- **3.4.7 Portability**
  - Is it permissible to utilize a lifting device to remove LRU's that exceed 70 lbs such as the generator set or laser chiller?
  - Is the weight of 70 lbs per LRU mandatory?
- **3.5.1 Survivability**
  - Are there specific ranges at which JLONS must survive the fragments from a 105/155 mm artillery rounds rather than the entire effective range?
  - Must the system be armored at all aspect angles to survive fragments?